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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/702,444

11/07/2003

Gerrick S. Gehner

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EXAMINER

RAEVIS, ROBERT R

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/702,444	Applicant(s) GEHNER ET AL.	
	Examiner Robert R. Raevis	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 22-35 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 22-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11-17-04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claims 1-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 9, "the mixing chamber flow" lacks antecedent basis.

As to claims 25,31, "the characteristic factor" lacks antecedent basis.

As to claim 30, what does "full-flow" (last line) mean? The phrase does not appear in the originally filed written specification, and thus is not defined.

As to claims 1,9,22,26,27, the term "unobstructed" does not appear to be consistent with the written specification. After all, the flows *are mixed*, and thus each one obstructs the other to some extent. What is it that (does not exist) that would otherwise obstruct the flows?

As to claims 26,27,25, how is "impinging" of the streams avoided as they enter the mixing chamber? After all, they are mixed. Where is the word "impinging" used in the written specification in a manner consistent with streams avoiding impinging?

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,4-6,26,28 are rejected under 35 U.S.C. 102(b) as being van anticipated by van Laar et al.

Laar et al teach a method to mix two gas streams, including: introducing a first air stream 2 of gas into a conduit 1 via a plurality of first stream passages 4 coupled to the conduit; directing a second hot-blast flow stream of gas into the conduit from a blast furnace; and combining the streams with ultimate discharge port. The conduit does not have blocking structure therein.

As to claims 5,6,28, the lines 2 and 3 are long enough to allow for developed flow.

As to claim 26, the fluid in the individual streams do not impinge before mixing due to their individual feed lines.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2,4-5,7,8,26,28,9,10,12-14,17,27,29,22-25,30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohsaka et al in view of van Laar et al.

Kohsaka et al teach (Figure 1) a method of mixing, including: introducing a first exhaust gas stream 2 into a mixing chamber (to the left of port 8a); directing a second stream 4 of gas into the chamber; combining the streams; and discharging the mixed stream.

The method does not use a plurality of stream passages for stream 2.

As to claims 1,7,28,9,14,17,27,29,22,30,31,32-35, it would have been obvious to employ a plurality of stream passages that terminate at Kohsaka's wall 3 for the stream

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2 because Laar teaches that a manifold 4,3 with multiple outlets may be employed to effectively add a stream to be mixed to a fluid conduit 1 carrying another stream.

As to claims 2,10, note the venture 6, which expands.

As to claim 4, note that mixing occurs downstream stream 2's outlet, suggestive that the stream should be just to the right of filter 4, and thus at the left end of the mixing chamber to allow for minimizing material of construction.

As to claim 5, the stream 2 must extend from the sampler to the engine, suggestive of a line that is long enough to have developed it's interior flow.

As to claim 8, note analyzer 16.

As to claims 26,27,25, the fluid in the individual streams do not impinge before mixing due to their individual feed lines.

As to claim 12, note the secondary mixing region (venturi 6) and the larger volume between the venture 6 and blower 7.

As to claim 13, the fluid lines demand that the material of construction be such that it is not be reactive with the samples, permitting for continued use of the sampling system over time, suggestive of use of steel.

As to claim 22, the inlets to the chamber allow for all streams to enter, and thus the streams are not obstructed.

As to claim 23, note that mixing occurs downstream stream 2's outlet, suggestive that the stream's entrance should be just to the right of filter 4 where there is a inclined wall portion that is distinct from the remaining wall portion to the right thereof in Figure

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1, and thus at the left end of the mixing chamber to allow for minimizing material of construction. This results in the first exhaust stream being at the end as claimed.

As to claim 24, the fluid lines demand that the material of construction be such that it is not be reactive with the samples, permitting for continued

As to claims 32-35, note the region between filter 4 and inlet 2 that allows for development of dilution stream.

Claims 3,6,15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohsaka et al in view of van Laar et al as applied to claims 1,5,9 above, and further in view of Yamasaki et al.

As to claims 3,6,15, it would have been obvious to employ a flow-rectifying plate between Kohasaka's filter and inlet for exhaust 2 because Yamasaki et al teach (col. 4, lines 49-50) application of such a plate to effectively transmit dilution air into a mixer. Such plate results in the region between the filter and plate being a manifold, the walls down stream of the plate being a mixer, and also results in a well developed flow of dilution second stream gas.

Claims 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohsaka et al in view of van Laar, and further in view of Yamasaki et al.

Comments that exist above regarding Kohsaka in view of van Laar with respect to claims 32-35 similarly apply here.

As to claims 32-35, it would have been obvious to employ a flow-rectifying plate between Kohasaka's filter and inlet for exhaust 2 because Yamasaki et al teach (col. 4, lines 49-50) application of such a plate to effectively transmit dilution air into a mixer.

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Such plate results in the region between the filter and plate being a manifold, the walls down stream of the plate being a mixer, and also results in a well developed flow of dilution second stream gas.

Claims 11 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohsaka et al in view of van Laar et al., as applied against claim 10, and further in view of Hanashiro et al and Dzael et al

As to claim 11, it would have been obvious to employ heaters in Kohsaka's system because Hanashiro teaches use of heating to maintain exhaust samples. In addition, it would have been obvious to employ insulation because Dezael teaches that insulation 17 may benefit a heated combustion gas sample to assure that a representative sample may finally reach any analyzer.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1,3,5,6,9,15 are rejected under the judicially created doctrine of double patenting over claim 4 of U. S. Patent No. 6,684,719 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

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The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: Claims 1,3,5,6,9,15 of the application include every limitation of claim 4 of the patent.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raevis whose telephone number is 571-272-2204. The examiner can normally be reached on Monday to Friday from 7am to 4pm. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



RAEVIS